

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

THE FARM INDEX

U.S. Department of Agriculture/April 1973

A281.8

DC BRANCH

F22

cop 3

1985

AGRICULTURAL
DIRECTIONS

12/4



U.S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY
RECEIVED

MAY 7 1973

PROCUREMENT SECTION
CURRENT SERIAL RECORDS

All systems are go for a spirited jump in beef supplies over the next several years. Key indicator is the accelerated buildup in cattle numbers.

By the January 1 count there were a record 122 million cattle and calves on farms, compared with 118 million on that date a year earlier. The 4-million increase during 1972 marked the sharpest rise since 1962. In 1971 the herd swelled by 3 million, and by just over 2 million in 1970 and 1969.

Significantly, most of this growth has been in beef cows and calves, thus providing the base for larger beef supplies in the future. The cow count on January 1 was up 6 percent, and next January's should be up again.

Near-term prospects for cattle slaughter are for moderate gains. Fed cattle marketings in '73 will expand enough to more than offset likely declines in slaughter of young cattle.

Fed cattle marketings in April-June will be stepped up from a year ago. On January 1 there were 9 percent more cattle on feed in weight groups that make up over half of spring marketings. Steep feed prices during the next several months will provide an incentive to livestock feeders to market cattle as soon as they reach the desired grade.

Marketings will probably peak in July-September, setting a new high for quarterly shipments. If as expected cattle feeders market at lighter weights this summer, this would temper increases in fed beef production. Fall marketings should be larger than in the fourth quarter of 1972.

Beef Eaters, N.B.

When beef prices are high and rising, the cattleman reacts in a predictable fashion. He makes plans to expand his herd so as to take advantage of the good prices.

But usually it happens that cattlemen overexpand... slaughter supplies become greater than the market can bear. Then, prices take a dip, cattlemen get discouraged, and they no longer hold extra heifers for herd expansion. This makes even more cattle available for slaughter, so prices weaken further.

ERS livestock watchers figure that within the next year or so the U.S. cattle inventory will have grown sufficiently large to support sizable gains in slaughter. Bigger beef production would be accompanied by lower cattle prices, which should show up at the supermarket.

Chances are retail prices won't drop to the levels of the mid-1960's. Explanation—the general rise in the cost of living coupled with the unprecedented demand for beef. Since 1965, consumption has gone up 16 pounds per person to a record 116 pounds. This year's gain could amount to as much as 3 pounds, according to current forecasts.

prices will probably remain above October-December 1972, when Choice yearling steers at Kansas City averaged \$44.35 per hundredweight.

Returns to hog producers will keep to the high side this year and should compare favorably with the strong showing in last half '72. Reflecting the bright outlook, the pig crop in June-November is apt to be up about as much as in December-May, estimated 7 percent larger than a year earlier. Since 1950, sharp swerves in the spring crop have always been followed by a further change in the same direction in the fall crop.

Hog prices in the summer and fall are expected to trend downward, but so are feed grain prices. This year's summer-fall decline in hog prices will be steeper than last year, when prices fell from \$29.40 per hundredweight in September to \$27.40 in early November.

Hog slaughter in the second half will likely be 6 to 8 percent greater than a year ago. At this level, slaughter would be the third largest for any like period in the past decade with the exceptions of 1970 and 1971.

After 35 months of steady increase, the milk flow slackened in late '72 and into '73. This could mean, say ERS dairy economists, milk production may dip slightly for the year as a whole. Last year's output came to 120.3 billion pounds, up 1½ percent from 1971.

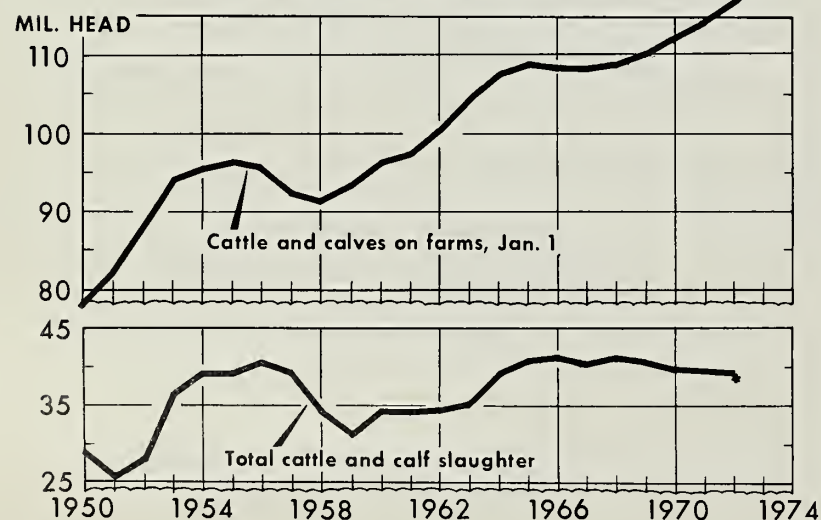
Any tapering in '73 production would be mainly due to high feed prices along with poor quality rough-

Outlook for cattle prices—

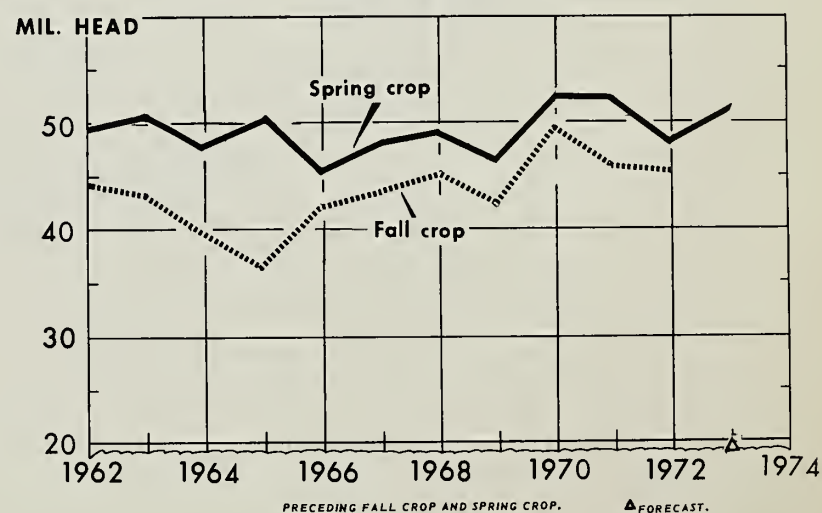
Choice steers at Omaha to weaken some in the second half of the year as beef production picks up and the cyclical upswing in pork output gets underway. But prices would still exceed the July-December 1972 average of \$35.65 per hundredweight.

Feeder cattle quotations. Next fall

CATTLE INVENTORY AND SLAUGHTER



PIG CROPS



age and short feed supplies in several key States. The feed situation is showing up mostly in a smaller rise in production per cow, but also in a slightly quickened pace of milk cow slaughter.

Output per cow, which last year climbed 2½ percent, was up less than 1 percent in January and February. Milk cow numbers fell about 1.2 percent compared with a 1.1-percent decrease for all of last year.

Though gains in output per cow may recover as pasture and forage crops become available, it's questionable whether they will return to recent years' levels until the fall.

Also in the '73 dairy outlook—

✓ Feed prices are likely to continue high in coming months and the milk-feed price ratio will stay sharply below a year ago at least until fall.

✓ Milk prices should be strong most of the year, even with the price support at \$5.29 per hundredweight, approximately 75 percent of parity—the minimum allowed by law.

✓ Attractive prices for beef cattle, plus high feed charges, will cause close herd culling and may be encouraging some farmers to quit dairying.

✓ Situation for dairy labor could become more scarce and more expensive if general unemployment declines as expected.

Next summer's carryover of rice is described by ERS as falling to "pipeline levels." Some upturn in domestic use will contribute to stock reduction, though the main force at work is a rash of buying for the export market.

The 1972/73 rice year began with an estimated supply of 97.8 million hundredweight—7 percent less than last season. Exports immediately moved into high gear, and the pace has hardly slowed since then. Poor rice harvests and expanding demand in Asia have raised import needs of some countries, and lowered exportable supplies in others.

U.S. rice exports in 1972/73 are seen running above the average of the late 1960's but still slightly below a year earlier. Exportable supplies will be all but exhausted by year's end.

RURAL

FARM

FOREIGN

SPECIAL REPORTS

Martin Schubkegel
Editor

Diane Decker
Diana Morse
Walter M. Patrick
Staff Editors

Contents of this magazine may be reprinted without permission. They are based on research of the Economic Research Service and on studies done in cooperation with State agricultural experiment stations. Use of funds for printing this publication approved by Director of the Office of Management and Budget, May 24, 1972. Subscription price: \$3.50 yearly (4.50 foreign). Single copies 45 cents. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

Features

4 Target: The Wise Use Of Our Land

Just what controls does the public have over private land use?

7 1985 Agricultural Directions

10-page roundup of how ERS sees the future of American agriculture

17 Exports 1985— Catalogue of Uncertainties

The iffy business of making long-range forecasts for agricultural trade

20 Economists on the Foreign Front

Working to boost U.S. farm exports

Departments

2 Outlook

21 Recent Publications

22 Article Sources

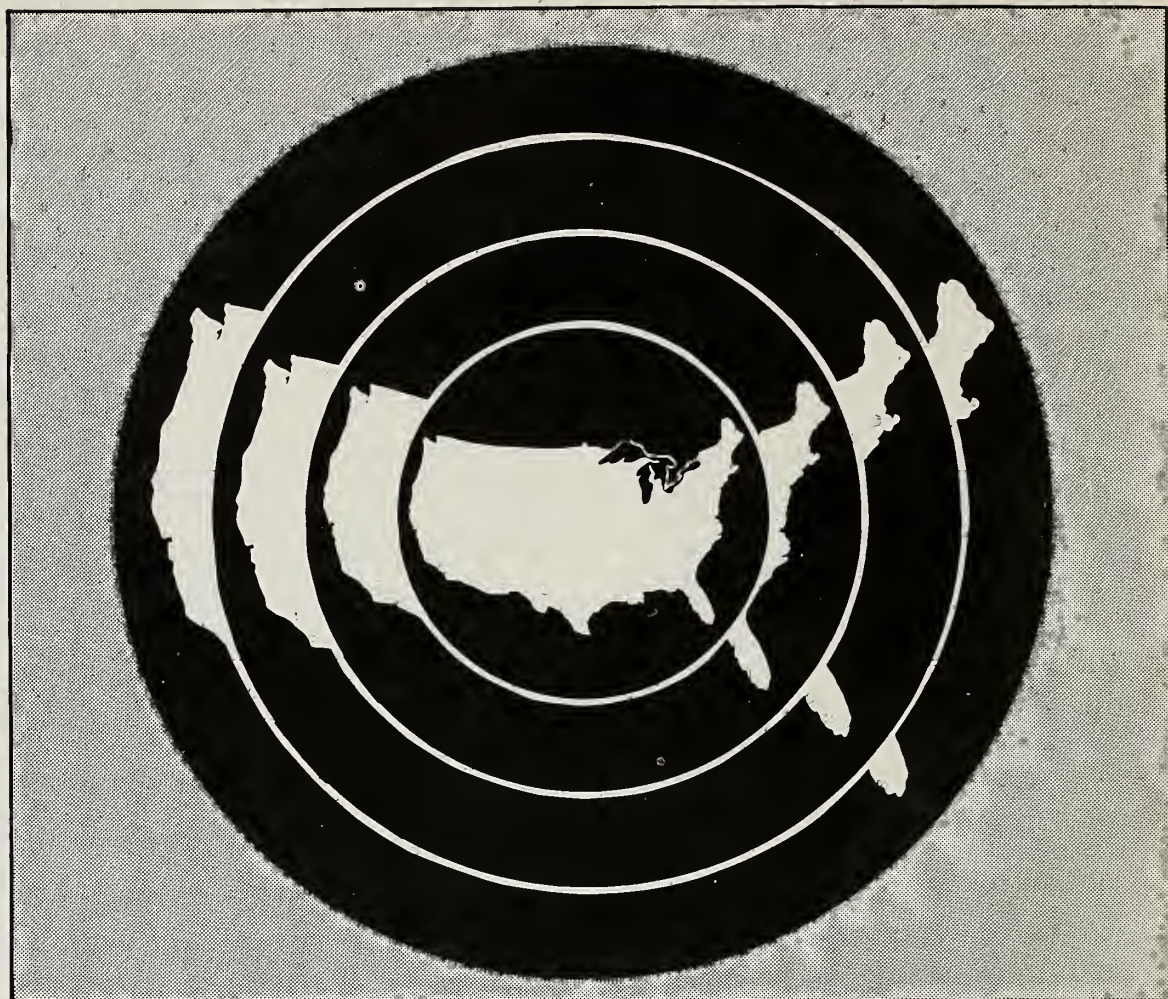
23 Economic Trends

The Farm Index is published monthly by the Economic Research Service, U.S. Department of Agriculture. April 1973. Vol. XII. No. 4.

NOTE: The numbers in parentheses at the end of stories are intended for readers who wish to write us for additional information. See page 22 for details.

TARGET:

THE WISE USE OF OUR LAND



Of growing national concern is the issue of how we can control development of private lands. Just what controls do we have? ERS reports here some powers the public has over private use of land.

What's stopping some of our best farmland from being chopped up into subdivisions?

Or a quiet village from being overpowered by sudden, "unstoppable" development?

Or a recreation spot, unique for its wildlife, from being developed till it loses its main attraction?

In essence—what control does the public have over private land use? In a study on land and water resources, ERS looks at this question. It concludes that there is an almost limitless variety of tools or devices available to governments to control land use. The more general problem is that they are not being used. This is particularly true in rural areas.

The ERS study notes further that those local governments using the tools do not in general devote suffi-

cient resources to make them effective.

Control by the general public can take many forms—including special purpose districts, but most of the power is in the hands of Federal, State, and local general purpose governments.

The Federal Government has the immense power to tax and spend; the State governments have a lesser power in this area but they have broad regulatory power; and local governments have a more limited power to tax and regulate but the unique power to hear and express the views of individual citizens through such means as council meetings and public hearings.

Main regulator. Traditionally, it is the local government that regulates land use, with the State governments having delegated this authority.

The main means have been through zoning ordinances and subdivision regulations. Building, housing, and health codes are also widely used, but are more limited in scope.

For rural land use, it may be the

county government that has the greatest control or the town or township, depending upon whom the State authorizes. This varies widely among the States.

On the books. Zoning of unincorporated or rural areas is authorized in all 50 States covering land in more than three-fourths of the 3,000 counties in the U.S.

However, local governments usually have the option of either adopting or not adopting land use regulations.

In general rural areas are far more deficient in the field of land use planning and regulation than urban areas. They're less likely to have a planning board, less likely to have a full-time planner, and they spend only about a third of what urban areas do per person for planning and regulating land use in their community.

Yet many of these rural areas are where the action is in terms of growth and they're the least able to cope with it.

Sometimes they lack the legisla-

tion. But often, they simply lack effective enforcement.

An example:

A small town in Vermont had the "misfortune" to be near good ski slopes. It suddenly became one of the biggest growth sites in the State—lots were sold and resold, nightclubs proliferated, a huge condominium went up.

Out of control. And the town of fewer than 2,000 permanent residents couldn't keep up with the services required even after taxes were doubled. The new sewage treatment plant became inadequate with the new building boom . . . police costs soared . . . and traffic jammed for miles through the town on winter weekends.

Vermont has one of the most stringent land use laws in the country. Local officials, however, say the State doesn't provide enough funds to communities for land use planning, zoning, and enforcement to make the laws effective.

The National Commission on Urban Problems reported that a sample survey taken in 1967 showed Standard Metropolitan Statistical Areas (SMSA's) spent three times more per person for planning, zoning, and building regulation activities than did non-SMSA's—essentially rural areas.

In addition to budgeting more money for land use planning and regulation, many communities need to take up the option on controls already available to them.

Take for instance the case of a predominantly agricultural county in California that couldn't put a stop to land speculation until much of its ranchland had been subdivided. Developers put in roads and mass-advertised the acre lots as vacation and second home sites.

Brought to halt. It took several years, and some trial and error, before the county found effective regulation in the form of zoning to stop the essentially speculative subdivisions.

But, as one official said, "If you take a 1,000-acre ranch and divide it

up into roughly 900 one-acre lots, with the remaining acreage in roads, you have ruined the ranch. A ranch with 900 owners can never be reassembled."

That county wound up with 17,000 acres of vacant lots.

With the county's current zoning, developers who want to change land zoned agricultural to residential have to request a variance from the planning office. And it's granted only if the developer can present a good argument why it should be done—plus show an attractive plan for development.

So far, most of the requests for rezoning variances in the county have been for expansion of an existing community. And development in these areas usually causes no severe drain on such county services as police and fire protection and schools.

Just how many local governments actually exercise their authority to regulate land use is not known. National statistics aren't regularly or systematically collected.

But from the 1967 survey by the National Commission on Urban Problems, it's apparent that rural local governments lag considerably behind urban areas.

The survey showed only 48 percent of the counties outside SMSA's had a planning board . . . compared with

80 percent of the counties in SMSA's.

In addition, 70 percent of the employees for planning and regulating land use worked part-time in areas outside SMSA's compared with only 28 percent inside SMSA's. For all jurisdictions attempting to regulate land use, fewer than 1 in 4 had any full-time employees.

On Capitol Hill. The President has recommended and the Congress is now considering legislation to establish a national land use policy. Legislation that is proposed would provide grants to States to assist them in improving their land use planning processes.

Most decisions would still be made at the local level in rural areas. The States would, however, be involved in decisions of more than local concern—such as environmental and regional matters.

In the decade ahead, the need to plan and regulate land use will increase as greater emphasis is placed on maintaining environmental quality standards. Practically all pollution problems have a land use dimension.

This will take greater coordination and integration of the powers available to the different levels of government in our Federal system. (1)

[Last in a series]

LOCAL GOVERNMENTS . . . AND THEIR ACTIVITY IN PLANNING, ZONING, AND BUILDING REGULATION¹

	Number of local governments	Planning board	Percent with Zoning ordinance	Subdivision regulation	Per capita expenditure ² (Dollars)
County governments					
Within SMSA's ³	404	80	49	63	0.54
Outside SMSA's	2,645	48	19	24	0.28
Municipalities					
Within SMSA's	4,977	68	75	61	2.19
Outside SMSA's	5,007	66	63	45	1.08
New England- type townships					
Within SMSA's	2,228	57	57	54	1.04
Outside SMSA's	2,732	43	27	25	0.65
Total governments					
Within SMSA's	7,609	65	68	59	2.16
Outside SMSA's	10,384	55	42	34	0.70

¹ Based on data from a 1968 report of the National Commission on Urban Problems. ² Based on 1960 population totals. ³ Standard Metropolitan Statistical Area—an entire area in or around a city or community of 50,000 or more people and where activities form an integrated economic and social system.

Nearly All U.S. Regions Ship Grain for Export

Some farmers in nearly every State will benefit directly from the expected export sales of 2.8 billion bushels of wheat, feed grains, and soybeans during fiscal '73, an ERS study shows.

Only New England, Georgia, Tennessee, Idaho, and Utah—all feed-deficit areas—are not likely to be participating in export activities.

North Dakota and Kansas, both estimated to ship at least 75 percent of their available wheat supplies, will account for nearly half the wheat exports. Out of a total of 39 regions in the study, 28 supply wheat for export, and 19 of these are estimated to export 50 percent or more of their available supplies.

Illinois and Iowa are expected to supply 54 percent of total feed grain exports. Altogether, 12 regions are

supplying feed grains for foreign trade, primarily corn.

Soybeans, on the other hand, are drawn from a larger geographic area, with 18 of the 25 producing regions shipping to foreign markets. Missouri and Arkansas have about 35 percent of total shipments.

The study determined optimum flows of wheat, feed grains, and soybeans to satisfy domestic and export demands given available supplies, port handling capacities, domestic demands, and transportation rates. Results of the study can be considered valid for the 1972/73 crop year only. (4)

Mixed News for Cotton: Receipts Up, Usage Down

Cotton farmers will have a pretty good year in 1972/73, what with receipts from cotton production the most since 1953. A much bigger crop—over a fourth bigger than in 1971—teamed with higher prices to yield an estimated gross income of about \$1¾ billion. In addition, producers received direct payments of about \$0.8 billion.

Ironically, receipts will hit a 20-year high at a time when cotton use by U.S. mills may mark a 24-year low.

If ERS projections prove correct, mill usage in the marketing year beginning last August could drop 5 percent from 1971/72's 8.2 million bales.

Explanation? Last season's steeper cotton prices coupled with relatively tight supplies. Likely result: a weakening of cotton's competitive position in the fibers market.

In 1972, use of all fibers picked up an estimated 8 percent, thanks to an expanding population with more money to spend. But cotton didn't share in the increase; in fact, cotton's share of the total fiber market narrowed to about a third in 1972 from 37 percent a year earlier.

Faced with rising cotton prices, textile mills turned to the alternatives. Early figures for the 1972/73 season show some manmade fibers

gained almost a fourth on cotton, based on the increase in manmade fiber use on cotton-system spindles.

Further cuts into the cotton market have come from imports of cotton textiles. They grew by a third during 1972 to the equivalent of 1½ million bales of cotton.

The other side of the trade ledger, however, shows cotton textile exports are also expanding sharply. Exports in 1972 were up a fourth from 1971 to the equivalent of approximately 600,000 bales.

Moreover, ERS cotton specialists point out that cotton demand remains strong for several important end uses, notably for cotton denim and corduroy. Denim production in August-December 1972 was up one-fifth from a year earlier. (2)

Texas Overtakes Iowa In Cattle Marketings

Longtime leader in the year-end tally of fed cattle marketings, the State of Iowa gave way to Texas in 1972.

The two States traded places last year, with Iowa dropping back to the No. 3 slot formerly held by Texas. Nebraska was again the runner-up.

Texas marketed 4.3 million fed cattle in 1972, or 16 percent of the 26.8-million total for the 23 major feeding States. Nebraska, with 4 million, accounted for 15 percent, followed closely by Iowa—3.9 million and 14 percent.

Texas also led the other 22 States in numbers of large feedlots. Of 184 feedlots with a one-time capacity of 16,000 head and over, about one-third (62 lots) were in Texas. California was next (33) and Kansas, third (21).

In general, feedlot size has been on the increase in the 23 feeding States, and the larger operations have been providing a growing share of all marketings. In 1964 the major feeding States had 44 lots with a capacity of over 16,000 head. They marketed 9 percent of the fed cattle. In 1972 the 184 lots in this size class accounted for 32 percent. (3)

ESTIMATES OF EXPORTS BY STATES, 1972/73

	Percent of Available Supplies		
	Wheat	Feed grains	Soybeans
New York	100 ¹	0	0
New Jersey-			
Pennsylvania	0	0	100 ¹
Ohio	12	0	36
Indiana	32	9	25
Illinois	8	46	20
Michigan	0	33	100 ¹
Wisconsin	70	13	0
Minnesota	92	13	67
Iowa	0	12	0
Missouri	20	2	100 ¹
North Dakota	78	11	²
South Dakota	3	34	²
Nebraska	52	0	0
Kansas	75	21	0
Delaware, Maryland,			
West Virginia,			
Virginia	0	0	74
North Carolina	0	0	67
South Carolina	46	0	43
Florida	71	0	100 ¹
Kentucky	51	0	86
Alabama	0	0	31
Mississippi	97	0	57
Arkansas	96	0	72
Louisiana	99	0	100 ¹
Oklahoma	86	0	100 ¹
Texas	24	24	7
Montana	85	0	²
Wyoming	59	0	²
Colorado	51	0	²
New Mexico	55	0	²
Arizona	52	0	²
Nevada	42	0	²
Washington	82	0	²
Oregon	100 ¹	0	²
California	52	1	²

¹ Should be interpreted as most, not necessarily all. ² Not applicable.

1985 AGRICULTURAL DIRECTIONS



What
will ag-
riculture be
like in 1985?

In the pages to follow, the Economic Research Service explores the possibilities. Some of the projections are more likely to come to pass than others. It's a good bet, for instance, farms will get fewer in number and larger in size. Thanks to advanced technology, one farmer will feed more people than ever before.

Farmers will become more specialized in what they produce, and their operations will be more tightly woven into the nonfarm economy.

Structurally, agriculture will in-

creasingly take on the characteristics of other industries, adopting the techniques of mass production and using vast amounts of capital and other production inputs.

In many other respects, future directions are far from clear. These gray areas bear on such debatable questions as who will control agricul-

ture
in 1985
... the im-
pact of envi-
ronmental re-
straints on farm
production ... the in-
roads by substitutes and
synthetics ... and the uncer-
tainties pervading the long-range
outlook for our farm trade.

As one economist points out, the projections in general "cannot be looked on as some inevitable unraveling of coming events. Rather, the projection is a sketch of possible developments, a tool to help us anticipate change, or perhaps a red flag to warn of undesirable consequences should current trends continue."

THE 1985 MARKET

Concerned about agriculture's ability to meet future food and fiber needs? ERS sees little cause for alarm.

U.S. production capacity, according to ERS analysts, appears fully ample to meet both domestic and export demand—at least through 1985. They see the agricultural market in 1985 shaping up something along these lines . . .

Beef and veal consumption, a standard yardstick of economic well-being, is projected to hit 140 pounds per person—up nearly 50 pounds from 1960.

Rising consumer incomes and a seemingly limitless demand for beef explain the increase. Production of veal appears to be headed toward minimal levels as calves increasingly move to feedlots.

Pork consumption is forecast to remain near current levels—about 70 pounds per person. This presumes, however, that further improvements in pork quality—such as leaner meat—will favorably influence consumer demand.

Minimal substitution. ERS hinges meat projections on the assumption that substitutes made from vegetable proteins will not make substantial

incursions into the meat market over the next several years. But the situation could change drastically by 1985.

Until now, popular preferences for meat taste and texture have precluded any large-scale substitution. Nevertheless, advances in food technology continue to drive up consumer acceptance of vegetable proteins, mainly as meat extenders. Should the substitutes capture a substantial market by 1985, repercussions in farm production and the food marketing system would be far-reaching.

Poultry's progress. Poultry meat appears headed for continued strong demand. Rapid growth in poultry consumption over the past 2 decades resulted when sweeping advances in production, processing, and marketing brought lower prices relative to other animal products and wider market outlets.

Growth in demand through 1985 will probably be less spectacular than that of the past 20 years. But further gains in production and marketing efficiency and the possibility of favorable consumer prices bode well for both chicken and turkey.

Chicken consumption will probably ease past 50 pounds per person by 1985, up from around 41 pounds in 1969–71. Meantime, per capita turkey use is expected to notch up to around 10 pounds.

The milk market will be plagued by further weakening in demand through 1985. Over the past 20 years, consumption per capita has plunged sharply as butter, cream, and other high-fat dairy products met with fierce price competition from vegetable substitutes. The same products also proved the frequent targets of adverse criticism regarding diets and health.

Experts predict that per capita consumption—milk equivalent of all uses—may fall by a tenth or more by 1985 to around 500 pounds. A drop-off this steep could offset the effects of population growth, leaving total milk use perhaps somewhere around recent levels.

Eggs share a similar fate. Per capita demand is seen somewhat smaller, as the steady downtrend in fresh use may not be compensated by anticipated growth in processed uses. Nevertheless, total egg use may chalk up a gain of approximately 15 percent by 1985.

In contrast, fats and oils have commanded a growing market in the past few years, largely through their wide use in fast food retail outlets.

Shift to oils. Per capita consumption of fats and oils may edge up 6–8

ASSUMPTIONS

In sizing up the demand for farm products in 1985—and the directions agriculture will take to fill it—ERS researchers made some basic assumptions about economic and technological developments over the next 12 years. For the most part, the assumptions reflect current trends.

Traditionally, the domestic market for farm-produced goods has grown just a little faster than population. Population increases through 1985 were assumed in line with the

Census Bureau's Series "D" projection—an annual growth rate of 1.2 percent. This "middle range" projection spells an increase from 209 million people at the start of this year to some 246 million by 1985.

As for economic growth, experts assumed total employment would rise 1½ percent per year, reflecting high birth rates over the past 2 decades, and the growing number of women in the labor force. Gross national product was projected up 4 percent annually; output per man-hour, 3 percent.

Farm programs were assumed to

continue on their present course, with emphasis on expanding markets and tailoring production to demand.

Similarly, trade policies of the world's leading importers and exporters were assumed unchanged. Higher consumption levels were thought likely for most importing countries.

Technological considerations include continued growth in livestock production efficiency and in crop yields per harvested acre. Environmental restraints on farm production were specified as minimal, with limited restrictions on pesticides.

pounds (fat content) to 60 pounds by 1985. The shift from animal fats to vegetable oils—a well-established trend—is expected to continue, with vegetable oils capturing at least four-fifths of the market by the mid-1980's.

Paced by increasing citrus production, per capita fruit consumption is seen slightly higher in 1985. Extensive tree plantings in major citrus areas over recent years are behind the projection for citrus use, which is expected to increase from 93 pounds in 1970 to around 105 pounds in 1985. Americans will probably eat less deciduous fruit per person, though prospects for apples are fairly good.

Use of all vegetables and melons has pretty much stabilized with consumption tilting in favor of processed forms. Per capita use of canned and frozen vegetables may reach about 130 pounds, while fresh use will probably drift down to roughly 90 pounds or less by the mid-1980's.

Potato demand, after declining for a number of years, has rebounded to some 120 pounds per person recently, and may push slightly higher before leveling off.

Among food grains, per capita wheat use in 1985 may wind up only slightly below the 153-pound level of the early seventies. Corn consumption has grown steadily over the past 15 years—reflecting the rising sta-

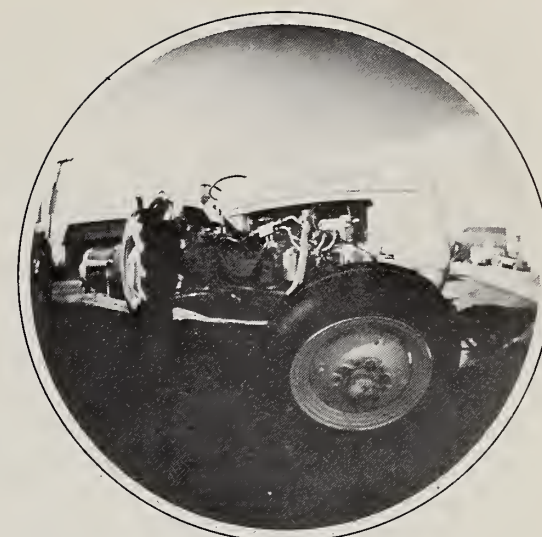
tus of corn sirup and sugar, and the emergence of new breakfast foods. Experts say corn use could rise another 4–6 pounds per person over the 1970 mark of 61 pounds. Use of rice is also headed up, while that of oats and other grains is seen near recent levels.

Sugar use, up lately because of problems with cyclamates, may inch up slightly by 1985. It appears that noncaloric sweeteners have served largely to expand the total sweetener market, rather than substitute for sugars.

Taken together, the food consumption projections show little change in terms of pounds or calories per capita. But they do indicate a shift in favor of red meats and costlier kinds of foods, such as processed items.

Steady commodity market. In the commodity market, cotton continues to lose ground to manmades, and per capita use may slump further to around 17 pounds per person by 1985. Tobacco has been under attack as a possible menace to health. But unless recent trends change, per capita use in 1985 may be near the recent 11½-pound level.

Export demand in the mid-1980's will depend on the extent of economic growth both in developed and less developed nations. Rising incomes spur demand for livestock products, and foreign markets will in turn look to the U.S. for feed grains



and soybeans.

Export prospects at this point pose one of the major uncertainties for U.S. farm producers. But total crop exports in 1985 are expected to surge to nearly 60 percent over the 1969–71 average. The outlook is brightest for soybeans and feed grains, and somewhat dimmer for wheat, rice, cotton, and tobacco. Total overseas demand will probably amount to slightly over a fifth of U.S. crop output.

Import specialties. On the other side of the trade ledger, the U.S. may import mounting shares of commodities that require intensive hand labor, or carry high support prices. For example, foreign producers may find the U.S. to be an attractive market for items such as tobacco and certain fruits and vegetables that have so far resisted mechanization. Imports of beef and dairy products

ALTERNATIVES

Alternative developments may alter the shape of the projected agricultural market.

First, there's a good possibility that population could grow more slowly than 1.2 percent a year, the rate used by ERS in most of its projection work.

If the rate drops to just under 1 percent—the Census Bureau's Series "E" projection—the 1985 population would reach 236 million people instead of 246 million.

Slower population growth would raise disposable incomes per person and in turn lift per capita consumption of several agricultural products. However, the small increase in use per person of these products would not offset the effects of smaller population, and total demand would be less than under the higher growth assumption.

Crop and livestock production would be around 2½ percent lower. And total harvested cropland likely would wind up 5 to 8 million acres smaller.

A second alternative involves the

possibility of environmental curbs on farm production. If, for example, restrictions on pesticides and fertilizers were made severe enough to cut projected yield increases in half, harvested cropland would have to increase some 40 million acres to reach the same production levels indicated by current trends.

While the expansion would be less than the total cropland now held out of production under Government programs, it would nevertheless require some adjustments in consumption and result in an uptrend in overall agricultural prices.

may also trend upward. Of course, any of these could be affected by changes in trade restrictions or agreements.

As for supplying the 1985 market, here's how ERS sees the prospects for farm production and land use.

Of all livestock products, output of poultry meat is likely to expand the most—more than 50 percent over the 1969–71 average. Beef production is seen up about 45 percent, while pork production will probably keep pace with population increases.

Growth in egg production is projected slightly lower than population growth. Milk output will probably hold at current levels. Combined total production of livestock and animal products is slated to rise just over a fourth, or slightly faster than the growth in population.

Crop production in 1985 is foreseen about a third larger than the 1969–71 average. Soybeans will be the biggest gainer, with output soaring nearly 90 percent over 1970. Feed grain production is projected nearly 50 percent higher.

Cotton output should rise a fifth;

rice, a third; while tobacco production is seen up about 15 percent.

Acreage constant. U.S. farmers can meet projected market demands in the mid-eighties with little or no change in harvested acreage.

Yields per acre will continue to climb, though probably at a little slower rate than during the past 2 decades. Annual increases in yields—projected at 2 percent—will be generated by improved cultural practices and crop varieties, as well as by increased use of fertilizers. In short, total yield increases should about match growth in demand.

In recent years, we've held some 50–60 million acres of cropland out of production. This acreage, which represents roughly 15 percent of all cropland, provides a cushion of productive capacity should land requirements rise higher than projected.

Related to prices received by farmers, the demand situation suggests prices may grow 2 to 3 percent a year.

This assumes little if any change in harvested crop acreage from the 1969–71 average, and a strong and

expanding demand for meats, with no big breakthroughs in the technology of livestock production.

Annual inflation is assumed at 3 percent, although this could be conservative. Prices of things farmers buy—which usually rise about in line with general inflation—will also continue to go up. Fertilizer prices, after trending down until 1969, are moving in the other direction, and increases may persist despite a large production capacity. Cost of energy of all types is projected higher. Farm wage rates are likely to continue their spirited rise of recent years.

Receipts up. Prospects for farm cash receipts: general advances for both livestock and crops. However, livestock receipts could be in for a temporary slowdown in the mid-1970's if cattle marketings expand enough to bring price dips, as now appears likely.

All considered, realized net income for farm operators is expected to trend up through 1985, though the expected gains may be both modest and erratic. (5)

THE FARM 1985

Some of agriculture's outward features—like land use—many change only slightly by 1985. Not so its inner makeup.

Here's how ERS analysts, looking at recent trends in farm organization, view the possible turns that some of agriculture's inner workings may take over the next 12 years.

Structural changes in store for the entire farm-to-market economy may be greatest at the grass roots level—back on the farm where inputs are brought together and put into production.

These changes will become more evident as agriculture, like every other part of the economy, becomes

more industrialized.

In the farm sector, the industrialization process goes something like this. As new technology is adopted, capital is gradually substituted for labor. This in turn promotes specialization.

The impact of specialization is two-sided. First, there are fewer commodities produced per farm. The average farmer today grows less than half the number of commodities his father produced. But more importantly, technological change divides up the many parts of the production process into separate specialized activities.

Over the counter. On the farm, this

means that many services and inputs traditionally provided by the farmer himself are now purchased in the marketplace. The products and services include feed and seed, fertilizers, chemicals, and energy.

They also involve technical information, management services, land rentals, and machine services—through machinery leasing and custom hiring. Occasionally the services can be the custom performance of the farming operation itself.

The trend toward having certain services and products supplied by specialists—many of them based off the farm—has been evident for several decades. Nonfarm specialists are expected to perform even more farm services in the future.

In short, farmers in increasing numbers will be transferring their traditional functions to other specialists, and will themselves be specializing in drawing together the re-

sources and services needed to turn out agricultural products.

Greater specialization in farming also implies greater separation between the ownership and use of resources. Farmers must no longer own all the traditional production inputs in order to use them. For example, the farmer needn't own land, but merely have access to it. He's not impelled to purchase machinery—if he can lease equipment or custom hire machinery services.

Nor does the farmer need to keep on a resident labor supply—if he can obtain labor in another way. The successful farmer doesn't even need to possess a lot of money, but he must have access to the services of money.

Common gap. To a certain extent, the gap between ownership and use of resources is well established. For example, a substantial amount of farming is performed on land rented from nonfarmers. Custom hiring of machines and equipment is commonplace. And even now, some equipment owners in the Midwest will perform the whole farming operation—from planting to harvesting—on a custom basis.

What does this mean for the farmer? Mainly, that the time may be near when we'll cease to identify a "farmer" by the land he farms, the cattle he feeds, or the farm operations he performs. Instead, we'll look for the manager or entrepreneur—the man who assumes the risks and sees to it that the proper mix of land, labor, machinery, and other

capital is assembled to produce farm products.

Further evidence of increasing industrialization in agriculture is the mounting substitution of capital for labor.

Substitution's impact. From 1940 to 1970, the number of farm workers dropped from around 11 million to fewer than 5 million. Meantime, the value of tractors and farm machinery surged from \$4 billion to nearly \$30 billion. And the value of production assets per farm worker jumped from \$3,000 to \$53,000.

By 1985, investment in farm machinery and vehicles is expected to swell by two-thirds, as the number of farm workers continues to taper off, though at a slower rate.

Increasing specialization and substitution of capital for labor has led to fewer and larger production units. While total farm numbers will continue to decline, farms with sales of at least \$40,000 may number well over 400,000 in 1985, up from only 113,000 in 1960.

The growing number of large-scale farms could vastly affect the types and the mix of farm inputs in demand in 1985, as well as alter the organization of the farm supply industry.

Already there are certain large farms that exert considerable bargaining power in the farm supply market by purchasing pesticides, fertilizers, etc., in bulk directly from manufacturers rather than from local dealers.

Direct buying is the exception rather than the rule. But it could become more common if the production of certain commodities becomes more concentrated in the hands of fewer and larger producers. The upshot would be that the farm supply industry would need to alter its marketing and distribution system to conform to the needs of these big specialized producers.

The poultry industry is proof of this chain of events. Streamlined suppliers to today's highly coordinated poultry industry have evolved

(continued on page 14)

Old Story, New Twist

If the forecasters are right, we'll have only 2.1 million farms in 1985, down from 2.8 million today.

The farm count has been dropping ever since 1935, when there were 6.8 million.

The familiar story of declining farm numbers has a new twist, however. Data from the Current Population Survey show that in the 1960's, farmers disappeared even faster than the farms themselves.

This survey defines a "farmer" as someone whose primary occupation is operating or managing a business that produces farm products. In 1960, 2.6 million persons fitted that description. The remaining 1.4 million farms were operated by persons who did not consider farming as their main occupation. Thus, for every three places called "farms" there were only two where the operator was really a farmer.

By 1971, the Current Population Survey reported 1.6 million farmers versus 2.9 million farms—or nearly two farms to every farmer.

Even if this trend slows in the next decade, it seems likely that not more than 1 million persons will be classified as farmers in 1985. In other words, at least a half million will not consider farming as their chief source of livelihood.

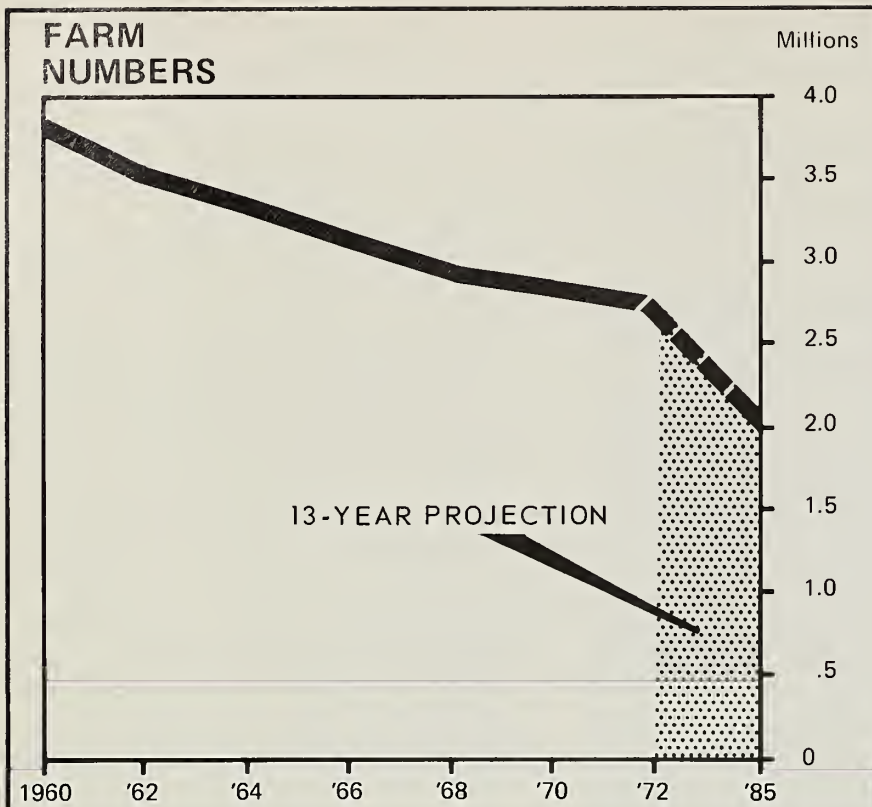
The rising proportion of farms to farmers mirrors the rapid industrialization of our agriculture. Increased specialization, labor-saving technology, and massive inputs of capital enable fewer farmers to handle larger farm units than ever before.

Of the 2.1 million farms to remain in 1985, an estimated 830,000 will have gross sales of \$20,000 or more. These units will account for over 90 percent of all cash receipts from farm products.

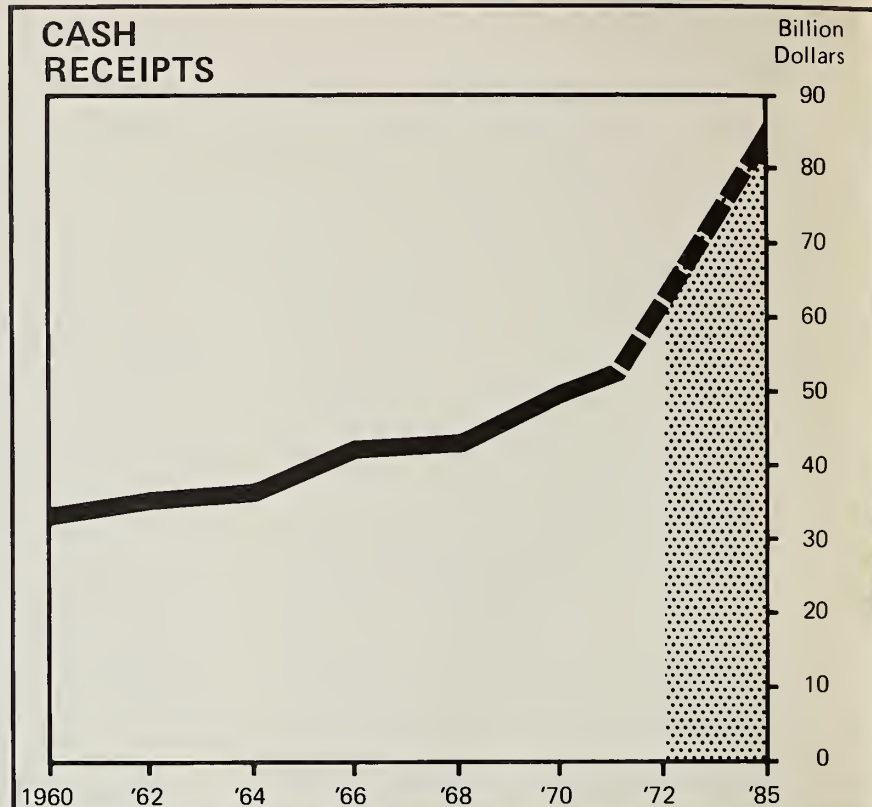
In 1971, farms in the \$20,000-and-up class numbered 618,000 and contributed 80 percent of the cash receipts.

Farms selling \$100,000 or more in 1985 are projected at 168,000. They'll be producing over three-fifths of total sales. In 1971 there were 63,000 farms in this sales class, accounting for about two-thirds of cash receipts. (7)

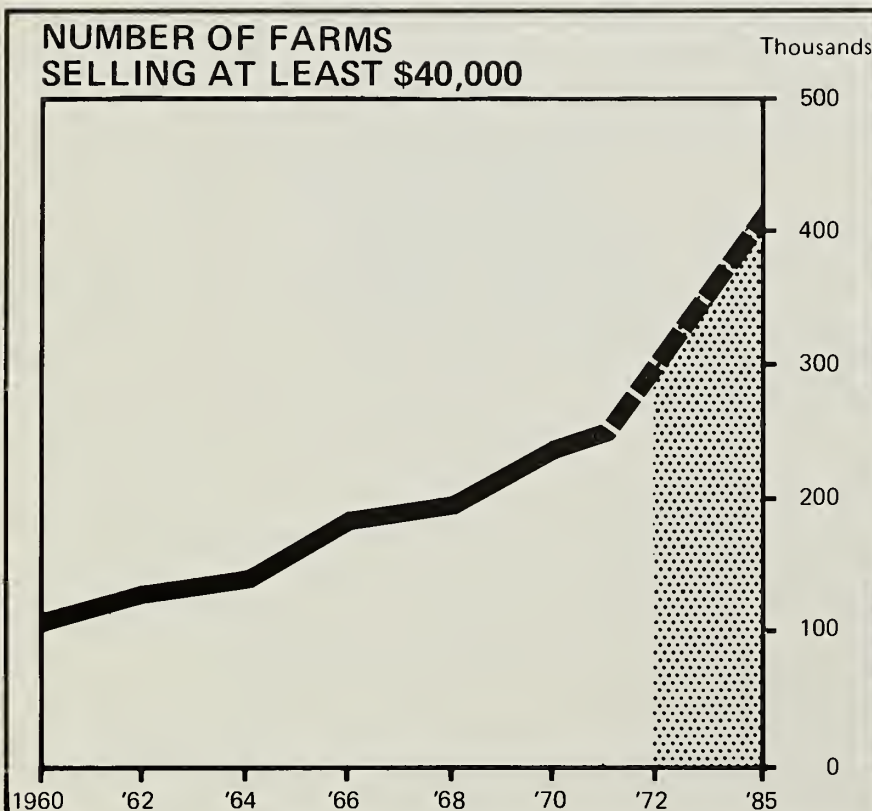




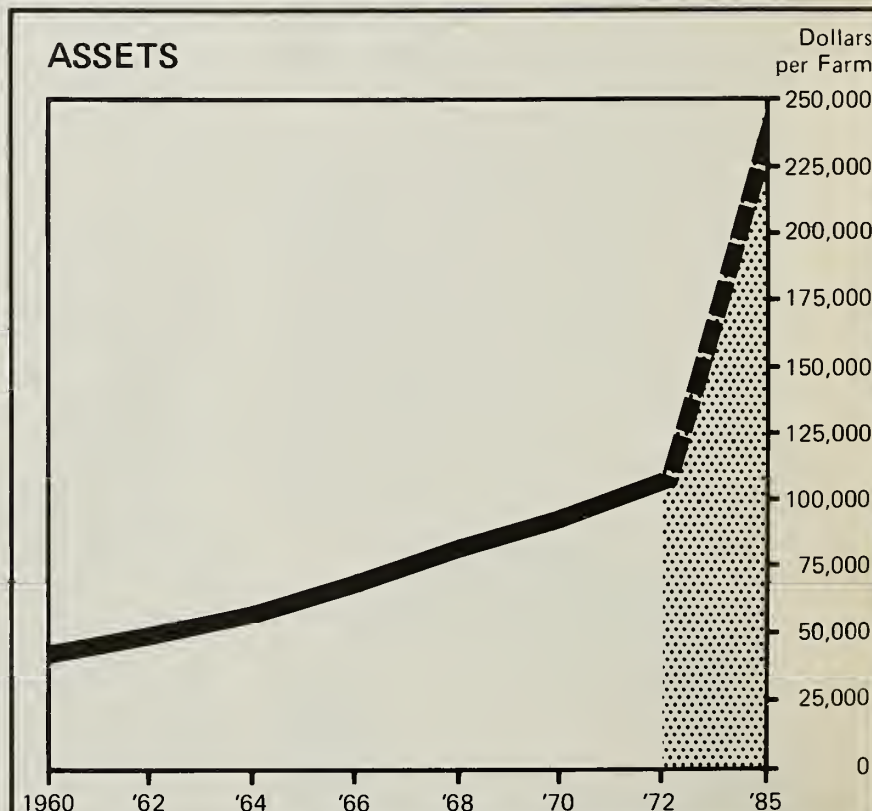
By 1985, there will be an estimated 2.1 million farms—nearly 800,000 fewer than in 1972.



Cash receipts—excluding Government payments—will rise generally though livestock receipts could slow temporarily if expanded cattle marketings bring lower prices.



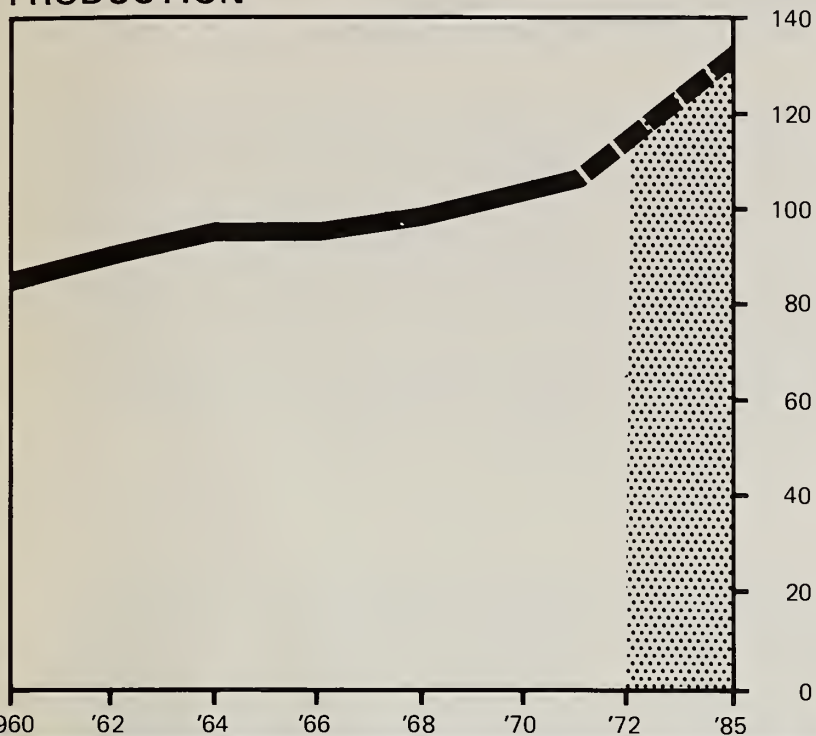
The trend toward larger farms will continue, and those with sales over \$40,000 may climb over 60 percent.



Capital assets per farm are projected to more than double by 1985, with both machinery and crop and livestock inventories nearly tripling in value.

LIVESTOCK PRODUCTION

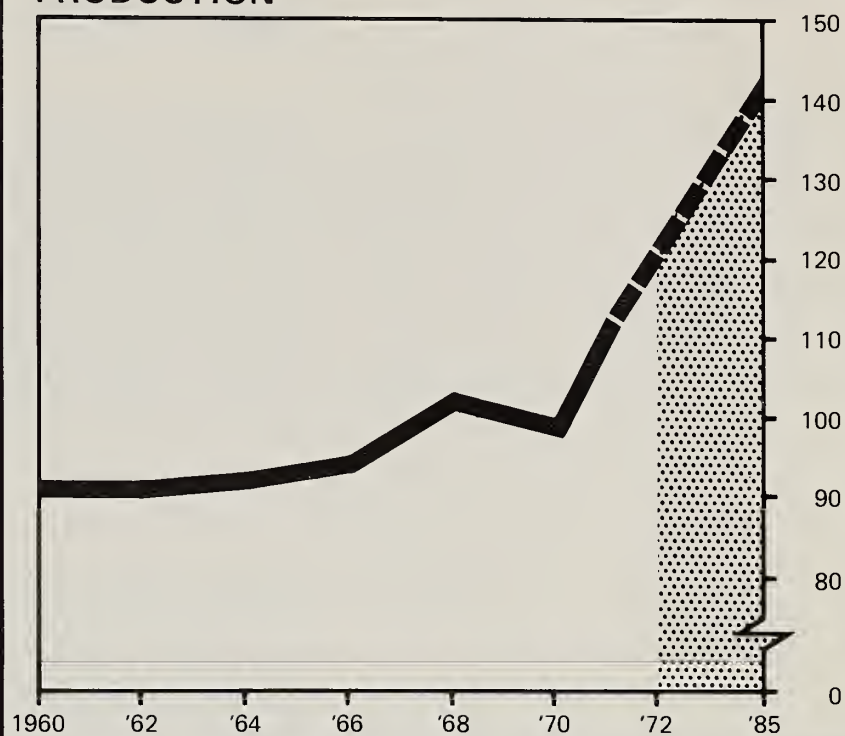
1967 = 100



Poultry and beef cattle are projected to lead increases in livestock production, with poultry up 50 percent by 1985 and beef cattle, 45 percent.

CROP PRODUCTION

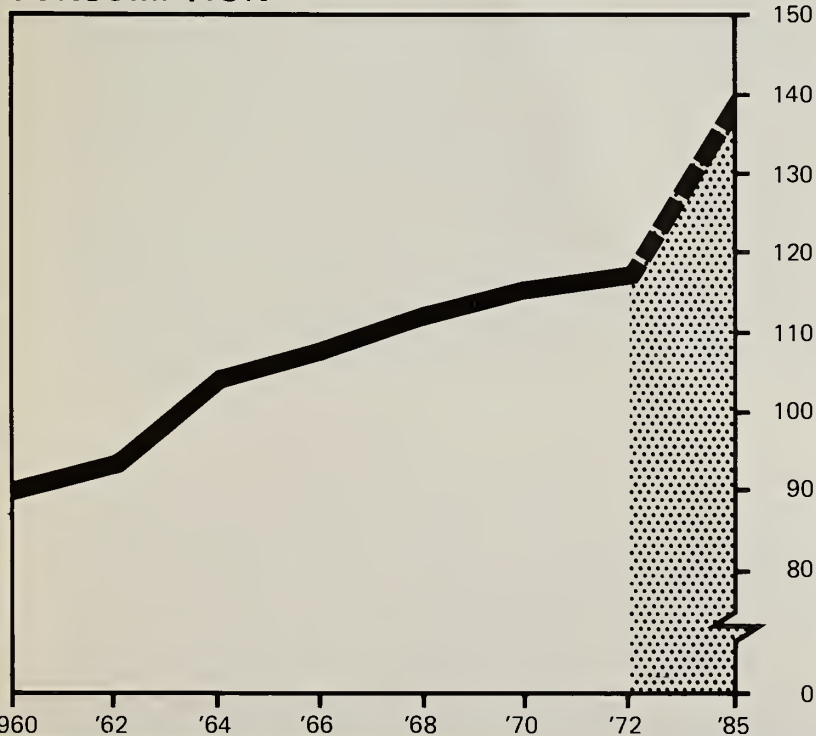
1967 = 100



Crop output is expected to increase by a third by 1985. Soybeans may rise by a whopping 88 percent, feed grains by 44 percent, and wheat by 20 percent.

BEEF AND VEAL CONSUMPTION

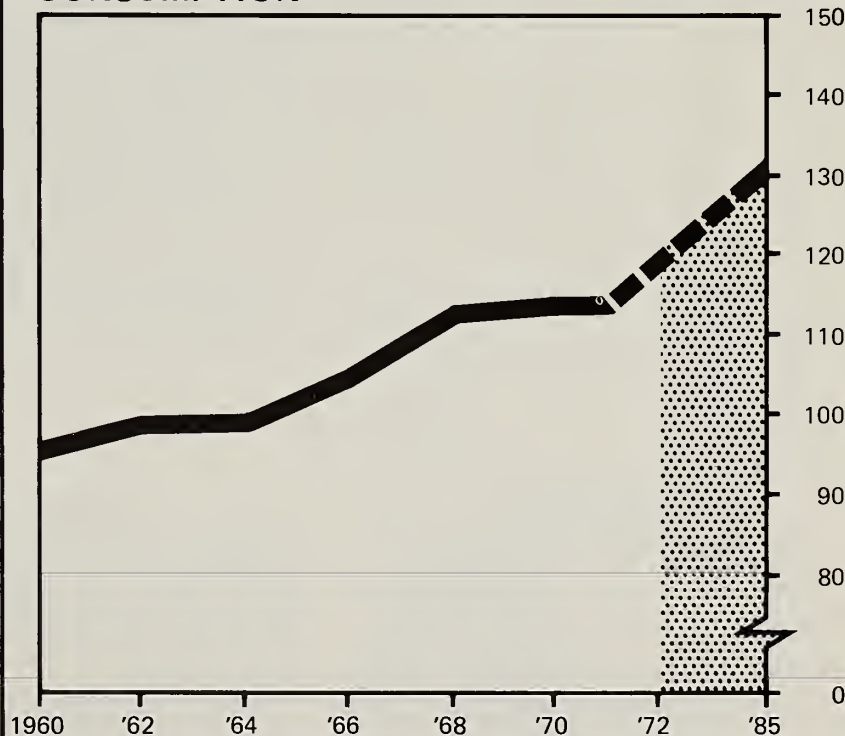
Lbs. per Capita



Rising incomes and strong preference for beef explain why we may be eating 20 more pounds of beef per person by 1985. Veal consumption is headed down.

PROCESSED VEGETABLE CONSUMPTION

Lbs. per Capita (fresh equivalent basis)



Consumers will continue to eat more processed vegetables—and less fresh. Fresh vegetable consumption may dip below 90 pounds per person by 1985.

THE FARM (*from page 11*)

from the myriad local firms that provided feed and chicks for thousands of farm flocks a generation ago.

Put another way, as production units become more like industries, they deal increasingly—and from necessity—with industrial-type suppliers. Small feed and seed dealers, local farm machinery outlets, and even small rural banks find themselves being passed over.

Two-way street. Just as industrialization in the farm production sector stimulates change in the farm input industry, advances in the farm supply business kindle the need for changes in the farm sector.

This was the case when the horsepower needs of certain large wheat producers in the Northern Plains led to the development and manufacture of super-sized tractors. But once on the market, the bigger tractors created pressure for farmers to expand their acreage.

Some of the biggest changes in the way farm inputs are supplied could come about from increased vertical coordination of the production and manufacturing stages in the food and fiber economy.

For example, we may find processing or marketing firms determining the mix of farm inputs needed for a uniform or desirable product.

Tradition breakers. Another change foreseen in the makeup of the input industry is the growing importance of nontraditional farm suppliers. Large city banks, for example, may be relied on more and more for capital inputs, as smaller rural banks may lack the means to handle accounts of large industrialized farming operations.

Similarly, manufacturing firms and nontraditional industrial suppliers are already providing agriculture with automated feedlots, environmentally controlled broiler houses, etc. And farmers in growing numbers will seek technical information and management advice from firms that generally haven't had close ties with agriculture. (6)

ON THE PARTICULARS...

LABOR. The cost of labor will come high in 1985, and with it will come changes in farm organization.

In the past, farm labor has been given lower minimum wage rates and has often been exempted from general labor legislation. In the coming decade, predictions are that farm workers will be brought under

the same minimum wage provisions as nonfarmers and given comparable treatment in other areas as well.

This means farm labor is likely to catch up with its nonfarm counterpart in wage rates, minimum wages, fringe benefits, workmen's compensation, unemployment insurance, and employment conditions.

CAPITAL. A sharp rise in assets and debts—accompanied by only modest increases in farm income—is likely to shape the farm capital picture to 1985.

The balance sheet of the farming sector in that year shows total assets of more than \$500 billion, compared with \$340 billion in 1972. Debts are expected to rise from \$67 billion in 1972 to nearly \$150 billion in 1985.

More dramatic are the increases in the per-farm figures.

Total assets per farm averaged about \$100,000 in 1970, and the average debt was about \$20,000. In 1985, assets are projected to hit \$250,000, with debt increasing at an even faster rate to \$71,000.

Will farm income in 1985 provide the cash necessary to support this debt load?

TECHNOLOGY. The effects of technological change will touch nearly every aspect of farming in some degree between now and 1985.

The consumer is likely to find his beef more tender and his pork leaner, thanks to animal technology.

Biological engineering, centering on crossbreeding and other genetic modifications, is working towards

improvements in the cutability and feed conversion of beef cattle. Selective crossbreeding is beginning to make breakthroughs in pork with a lower fat content.

In the area of farm machinery, predictions are that by 1985 about 15 percent more horsepower will be supplied by one-third fewer tractors—chiefly because larger, more pow-

NATURAL RESOURCES. Nature overlaps technology in at least one important area: the much-discussed energy crisis and its possible effects on the 1985 farmer.

When it comes to fertilizer use, for example, a shortage of natural gas—the basic ingredient of anhydrous ammonia—would result in limited supplies and higher prices of nitrogen fertilizer.

Any shortage of petroleum would present direct problems for farm production. And indirectly, with non-

farm industries playing a greater role on the farm, any fuel and heat shortages they suffer will be passed on to agriculture.

The controversy over land use is likely to have reached center stage by 1985. At the very least, there will be growing pressure for more direct government involvement in how land is used. This will include continuing efforts to define a national land use policy. Additional public involvement could range from zoning and other restrictions to limiting the size of

In the last category, consideration is already being given to limiting tractor noise to a maximum of 85 to 90 decibels in cases of sustained exposure by tractor drivers. Few of today's tractors meet this noise standard.

Further, with growing concern over the effects of farm chemicals,

farm employers are apt to be required to furnish protective clothing, bathing facilities, etc., for workers exposed to pesticides and other hazards.

These changes—and the increased costs they will entail—are likely to have far-reaching effects on the structure of the U.S. farm.

One likely result is increased polarization: on the one hand, we will have the farm small enough for all the work to be done by the operator without hired labor, and on the other, the farm large enough to face the ever more complex problems and regulations that will fall on labor management.

The trend, say ERS sources, will be to meet the burden of debt payments by increasingly turning to leasing as opposed to ownership. The result will be that the farmer-owned share of assets, especially the more costly ones such as real estate, will decline.

More farm families will need to supplement their incomes with off-farm jobs. This trend, which has

been clearly marked in farm income figures over the last 10 years, is expected to push nonfarm income of the farm population to \$20 billion by 1985, up more than \$6 billion from 1971's \$13.9 billion.

Much of this nonfarm income will be earned by farm families in the lower gross sales classes, who in turn will use it to pay off debts and underwrite assets.

Paradoxically, credit may be easier to come by for the small farmer than the large one.

Traditional lenders appear willing to provide funds to farmers with off-farm jobs. But for the large commercial farms, more capital may be solicited from new sources such as large city banks and from old sources willing to change to accommodate the needs of large borrowers.

erful machines will be doing more of the work.

Specialized equipment for confinement livestock and poultry operations will probably be in growing demand, along with items like continuous-flow feed mills, waste disposal systems, and devices for environmental control of livestock facilities.

The environment will also be a

factor in pesticide technology. Environmental concerns will continue to bear upon the kind and quantity of pesticides used, with increased unit costs likely for certain chemicals needed for more selective treatment of weeds and insects.

Biological insect control, waiting in the wings, is likely to be tagged at a higher price.

Methods of applying fertilizer should become more refined as we come to know more about the ways plants utilize nutrients.

In plant breeding, increased emphasis will be placed on growth characteristics and suitability for mechanical harvesting. Prime beneficiaries are expected to be high-lysine corn, hybrid wheat, and sunflowers.

land holdings, or even public ownership of land.

With more land rented, rather than owned, by those who farm it, there could grow up land service agencies that would function more or less the way banks do—that is, mediating between the owners of land and those who use its services.

Such middleman agencies would help assure that land services go to the most productive users, and could bring more equitable contracts and leases into play to insure fair terms

to both owners and users.

Though our land supply is fixed, the amount is likely to be sufficient to produce the crops we'll need by 1985.

Likewise, water—another vital natural resource—will still be available to us in abundant quantities. While difficulties due to declining ground supplies or to competition from other uses could pose problems in some localities, in the aggregate no serious shortfalls are currently foreseen. (8)



THE SYSTEM 1985

Time was when the farmer had a bigger say in what went into the Nation's food basket.

Now it's the processor who is calling many of the shots . . . making decisions as to the kinds and amounts of commodities to be produced by agriculture.

The processor is guided by the wants and desires of the consumer. And the consumer's demand for food is shifting from raw commodities to more sophisticated products.

If these trends continue in years to come, multi-product processing firms will probably assume even greater control over the food system. Agriculture may be regarded as just one stage in the production and distribution of consumer food products—the supplier of raw materials. Production of the raw materials will be dictated by market requirements.

Split in the farm sector. How agriculture will adjust to this role remains to be seen. But based on recent trends, it could happen that the farm sector by 1985 will divide into two distinct and very different parts. One will be composed of independent farmers producing and selling on the open market, as they do today.

The big change expected in this part of the farm sector is that the production units will become fewer and larger between now and 1985. The commodities they'll produce are the major field crops—mainly cash grains and forage crops—and range livestock.

The other arm of the farm sector will be tied closely to the processing-distribution stages of the food system, mainly through production contracting and vertical coordination.

In 1985, highly coordinated enterprises may control nearly all livestock feeding, dairying, and poultry production. This is already the case

in broilers, where over 95 percent of the production is under contract or vertical coordination.

Twelve years from now, cooperatives may be marketing all the fluid grade milk. And they may be producing most of our dairy products, either under long-term contracts with merchandisers or by selling their own branded products.

Cattle feeding will probably be linked with slaughter operations into a highly industrialized setup. Hog production, now dominated by family farms, may also move in this direction, assuming the industry resolves technical problems associated with large-scale operations. Vegetables for processing, sugarcane, and sugar beets are already being produced under industry-like conditions, so no big changes are on the horizon.

Catalysts. At work will be a number of factors to speed the industrialization of agriculture. One has to do with the pressure to deal with the animal waste problem.

Large feedlots are installing waste disposal systems that should be able to meet the most rigid standards for water quality. Costs of these systems are beyond the means of small, family-type operations.

Another factor: new regulations governing pesticides and chemical

residues in food products. Stiffer standards may give food processors added incentive to exercise control over agricultural production.

Finally, unionization of farm labor could hasten the exodus of small and marginal producers of labor-intensive commodities. Though mostly directed toward large-scale corporate farms and producers, the efforts of farm labor organizers could mean the smaller farms will have to match the wage increases and other employment terms offered by their competitors.

From all this it's apparent that some farmers, in their growing role as suppliers of raw materials, may lose their independence and bargaining power. A closer tie-up with the processing sector, however, carries several advantages.

Under contract arrangements, farmers have guaranteed outlets for their goods.

What comes naturally. Increased efficiency can result when farmers concentrate on what they do best—i.e., on production of raw products—without having to worry about finding markets.

Processors and distributors, assured of adequate supplies, can also do their jobs more effectively.

In some cases, farmers will be able to retain bargaining strength through group action, such as by joining cooperatives and bargaining associations. Already many cooperatives have taken steps to improve their competitive position by merging into large regional organizations.

Joint ventures. In another type of arrangement, co-ops have undertaken joint ventures with corporate marketing firms. The co-ops have responsibility for supplying the raw materials, and the marketing firms, for product development and distribution.

As agriculture becomes more market oriented, food firms will also be doing business in new ways. The trend will continue for food companies to diversify into other activities, and more nonfood firms will be getting into the food business. (9)



Forecasting next year's exports of U.S. farm products is tough enough. Forecasting them 12 years from now borders on the impossible.

As summed up by one ERS analyst, the future reads like a "catalogue of uncertainties."

Our exports would reach \$13-\$14 billion by 1985, if you assume a continuation of the 1953-72 trend and allow for price increases.

But economists have reason to wonder whether the 20-year trend is a good indicator of exports in years to come.

"A number of developments have brought unusually large elements of uncertainty into long-run forecasts of our farm trade," said an ERS spokesman at the National Agricultural Outlook Conference held in February.

Topping the list of these developments are the new trade relations with the USSR and the People's Republic of China.

Wheat to Russia. The huge U.S. wheat sales to the USSR in fiscal 1973 resulted mainly from a poor Soviet crop, both in quantity and quality. Thus, the U.S. cannot count on such sales year after year.

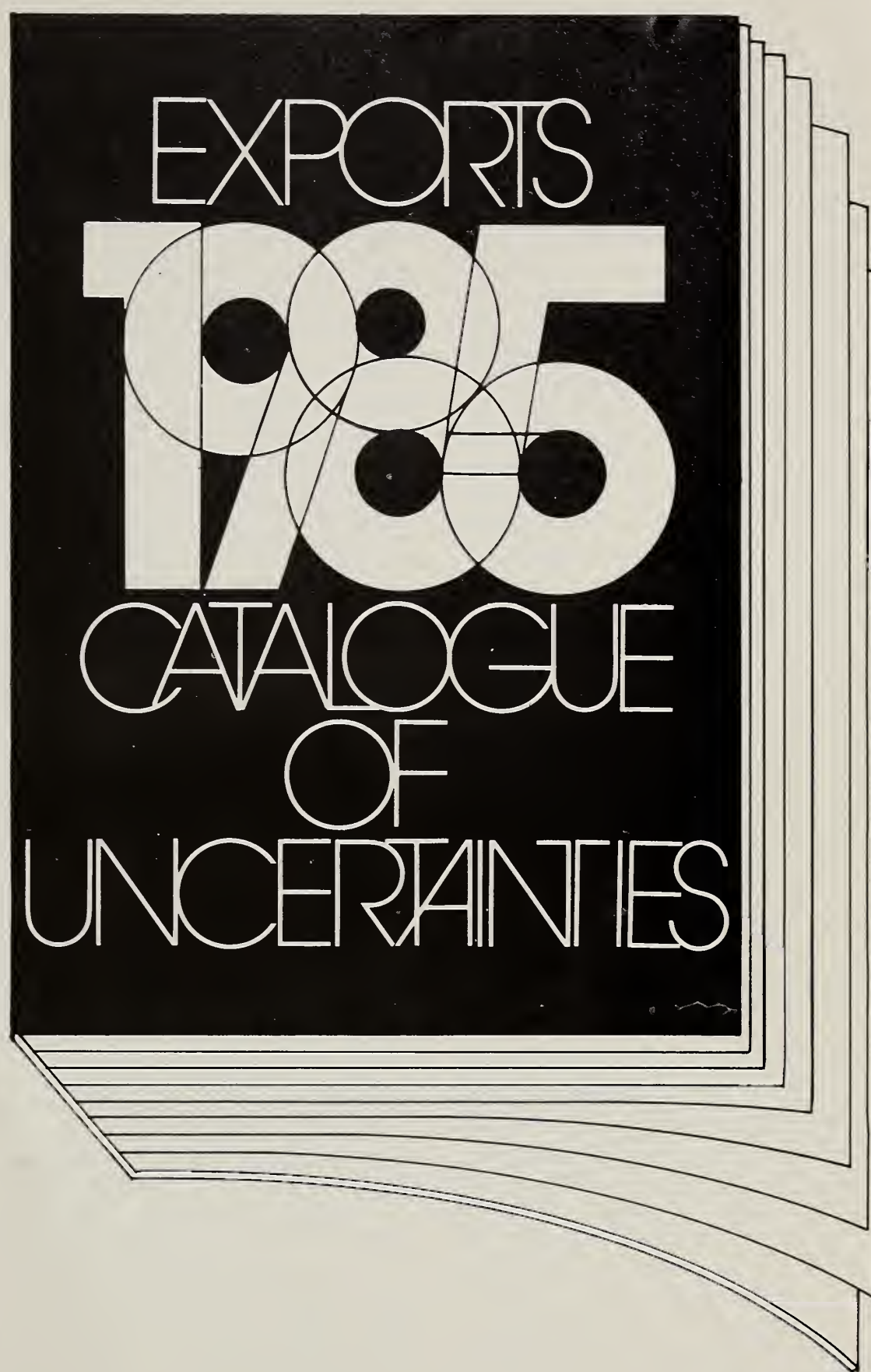
Though we also sold livestock feeds to the USSR in 1972/73, and the sales outlook seems favorable, the timing and size of future sales is questionable.

On the one hand, Soviet leaders have decided to make more livestock products available to consumers. On the other, we know little about how the Soviets determine "demand" for livestock products within their system of administered prices and controlled supplies. Also, regardless of increases planned for livestock production, the past performance of USSR agriculture has often fallen short of the targets.

More ifs. Adding to the uncertainty surrounding the supply and demand situation in the USSR—

✓ The effects of weather on USSR grain production are sizable, but are hard to estimate.

✓ Data are lacking on the level of



Soviet grain stocks and on grain utilization, including the amount of wheat fed to livestock.

Over the long pull, our farm exports to the Soviet Union will be greatly affected by the level of overall trade between our two countries. If the USSR succeeds in selling us more nonfarm products, then it would be inclined to take much more of our farm products.

As one example, ERS cites the possible U.S. purchase of natural gas from the USSR. ERS cautions, however, this may involve large U.S. investments in production and processing facilities in the USSR. Repayment on the debt on those investments might leave the Soviet Union with little to buy other things from us for many years.

Trade with China. As for the People's Republic of China, nonagricultural products make up the bulk of imports. The principal commodity imported throughout the 1960's was wheat, and wheat will continue to offer sales possibilities for the U.S.

Cotton also shows potential, the U.S. having recently made a large cotton sale to the People's Republic. The U.S. might break into this market on a regular basis, particularly if China's textile imports expand or if China raises its domestic cloth ration.

Beyond these generalities, trade forecasters find little basis for projecting the volume of our wheat or cotton shipments to the People's Republic. And apart from these commodities, U.S. exports in the near future may be confined to small amounts of a scattered selection of farm products. This does not, however, rule out the possibility of changes in China's trade patterns that could result in accelerated exports for the U.S.

Trouble in the EC. Development No. 2: expansion of the European Community (EC). The new members, as of 1973, are the United Kingdom, Ireland, and Denmark. By December 1977, these countries are to adopt the EC's agricultural system of guaranteed prices, price-support

buying, variable levies on imports, and export subsidies.

The switch to EC price levels implies tighter border protection in the form of variable levies on imports from the U.S. and other outsiders. Our commodities most seriously threatened include feed grains, wheat, rice, unmanufactured tobacco, fresh citrus, apples and pears, canned fruits, canned asparagus, citrus juice, and prunes.

Case in point. For example, due to higher domestic prices for feed grains, the U.K.'s feed use will be lower than under its previous system of deficiency payments. Also likely are large increases in U.K. production of feed grains, bringing that

country closer to self-sufficiency.

Under the rules of the General Agreement on Tariffs and Trade (GATT), the expanded EC is obligated to renegotiate with GATT's members—and that includes the U.S.—on proposed duties and other regulations of commerce affecting GATT members outside the EC.

Conceivably, these negotiations might lead to a softening of the EC's attitude toward protectionism. If so, the impact on our farm trade would be substantial.

Development No. 3: the currency devaluations. Only about 40 percent of our farm exports could benefit following our 1971 devaluation. Many countries devalued along with us; others have nontariff barriers that offset the positive effects of devaluation. As to the 1973 devaluation of the dollar, U.S. farm exports should benefit. However, as with any devaluation, there are at least two unknowns: the extent to which consumer demand will go up because of lower prices, and the extent to which the decreases in prices of imported products will be passed on to the consumer.

Green Revolution. Another uncertainty—the “Green Revolution,” which had a setback in 1972. Much of the blame was put to bad weather. There are, though, a number of other problems that have thwarted the effective adoption of new technology—such as deficient water control systems, salinity and waterlogging of cropland, inadequate pest control, and inadequate food storage facilities.

ERS specialists believe these problems will in time find solutions. Too, statistics show an overall improvement in the world's food situation through the years. ERS projections indicate further improvement in per capita nutritional levels in the developing countries.

Finally, ERS lists these other developments that are making the export outlook very iffy:

✓ For some developing countries, petroleum exports seem likely to produce large amounts of foreign ex-

Best Estimates

The uncertainties notwithstanding, here are key projections for U.S. exports in 1985, using as a base the average levels of fiscal 1970 through 1972:

Feed grains. If by 1985 the Soviet Union and Eastern Europe come close to self-sufficiency in feed grain production, the volume of our feed grain exports would increase 33 percent. The increase would be over 100 percent under these conditions: that the USSR and Eastern Europe, because of policy decisions and trade relations, do not reach self-sufficiency; and, that livestock and poultry production expands much faster than in the recent past in the less developed countries, with a resultant increase in feed grain imports.

Soybeans. Our export volume may swell nearly 85 percent from the base period. Prices would be lower than at present, but higher than in the base period. Oilcake and meal exports are slated to rise some 40 percent, and oil, about 20 percent.

Volume of both *cotton* and *wheat* exports is projected to increase about 25 percent, and *rice*, 40 percent.

Adding up all the commodity projections, and multiplying them by the higher prices expected, ERS came up with a 1985 export total of around \$13-\$14 billion. (11)

FARM EXPORTS 1985: A CLOSER LOOK AT THE PROJECTIONS

Commodity	Quantity		Value			
	1969/70- 1971/72 average	Projected 1985	1969/70- 1971/72 average	Projected 1985	Percent change 1970-85	
					Total at projected prices	Annual rate at projected prices
	Million metric tons		Million dollars		Percent	
Wheat	17.5	22.0	1,064	1,584	49	2.7
Feed grains	20.0		1,094			
Low		26.6		1,609	47	2.6
High		40.1		2,586	136	5.9
Rice	1.7	2.3	305	517	70	3.6
Soybeans	11.4	20.9	1,245	3,187	156	6.5
Oilcake and meal	3.9	5.5	338	798	136	5.9
Vegetable oils	1.0	1.2	295	356	21	1.3
Cotton, exc. linters	.7	.9	456	635	39	2.2
Livestock and meat products	—	—	674	1,100	63	3.3
Other	—	—	2,039	3,300	62	3.3
Total	—	—	7,510			
Low	—	—		13,086	74	3.5
High	—	—		14,063	87	4.3

change that governments may use to encourage investment in broiler and cattle feeding enterprises. If this happens, then demand for U.S. grains and oilseeds will quicken in countries that previously have been insignificant markets.

✓ In 1973 a new round of interna-

tional negotiations will be started to reduce trade barriers, with special attention to agricultural trade. The impact on our trade would be large if substantial progress is made.

✓ Recent growth of economies in many countries is unprecedented, and demand for foods could surge

much faster than in the past. Again, U.S. trade could benefit from the situation.

As ERS sees the world scenario, the capacity for cereal production under normal weather conditions will expand more than cereal consumption. The results could be (1) a rebuilding of wheat stocks, (2) some downward pressure on prices, (3) programs to restrict grain production in the main grain exporting countries, or (4) a combination of these.

Developing countries as a group will continue to import wheat, rice, and coarse grains. Exports will flow principally from the five or six major exporters in the developed world.

Demand for meat will stay strong—notably in North America, Western Europe, and Japan—and this will be reflected in bigger demand for high protein feeds.

For dairy products, projections call for ample supplies at relatively low prices. Australia by 1985 may cease to be an important exporter of dairy products, with the European Community picking up much of the slack. (10)

Recordbreaking Streak Continues for U.S. Agricultural Exports

U.S. agriculture established another milestone for exports in 1972, setting a record for the third year in a row.

At \$9.4 billion, the export value advanced 22 percent from 1971's \$7.7 billion for a gain of \$1.7 billion. The 22-percent jump was also one of the largest year-to-year increases ever recorded.

ERS attributes the record shipments mainly to reduced agricultural production in many foreign countries that were plagued by adverse weather. Other factors—the massive grain purchases by the USSR, a drawdown in grain supplies in major exporting countries, stepped-up demand for protein meal, and a general upturn in foreign economies.

About one-third of the gain in

1972 exports came from higher prices for U.S. commodities, particularly for cattle hides, soybeans and meal, meats, most fruits and vegetables, cotton, tobacco, and rice. The remaining two-thirds stemmed from expanded volume of exports, especially of grains, soybeans, tobacco, and fruits and vegetables.

U.S. exports to all major areas picked up last year. The USSR emerged as an important customer, taking over \$438 million worth of our agricultural products (excluding transshipments) compared with only \$30 million in 1971. Exports to Japan—top buyer—advanced to a record \$1.4 billion, up from \$1.2 billion a year earlier.

After a 20-year lapse, the People's Republic of China became a signifi-

cant market, with purchases of \$58 million. Exports to Western Europe rose by 16 percent, from \$3.0 billion in 1971 to \$3.5 billion in 1972. Shipments to Latin America increased by 10 percent. There was also substantial growth in exports to many Far East countries, and a slight gain in shipments to Africa.

With the high level of exports in 1972, U.S. farm trade was able to maintain a healthy balance. Exports exceeded imports of \$6.5 billion by \$3.0 billion. This trade surplus helped offset a record deficit in trade of nonfarm products, which amounted to around \$9.4 billion in 1972.

In fiscal year 1972-73, farm exports are also heading for a new record of over \$11 billion. (12)

Economists On the Foreign Front

The story of USDA's systematic attempts to analyze foreign markets for American farm goods really begins with a 19th century journalist, Jacob R. Dodge, who abandoned newspapers in 1866 for a clerk's job at the Department.

In time, Dodge rose to become USDA's chief statistician and gained a reputation as the father of the Department's modern estimating and reporting service.

Yet his interests led into more than figures on domestic production. Less than 6 weeks before his retirement on March 20, 1893, he submitted a 200-page report that he had worked on for years detailing the production and distribution of the world's principal agricultural goods. Coming on the eve of one of the country's worst depressions, his study painted a critically needed picture of U.S. overseas markets.

Dodge's legacy. A year to the day after Dodge left USDA, Agriculture Secretary J. Sterling Morton created the Section of Foreign Markets. Its purpose: "to furnish information on the world's markets with special reference to their demands for agricultural products."

Morton's move not only established the ancestor of today's Foreign Agricultural Service. It also caused the Department's researchers from that time on to dedicate an increasing amount of attention to the international scene—searching for its needs, identifying its strengths, trying always to anticipate future conditions and find ways of boosting America's farm sales abroad.

As agricultural economics grew

into a specialized profession around the turn of the century, this job began to fall mainly to the Department's economic experts.

The Section of Foreign Markets was elevated to Division status in 1902. And in 1922, after several more organizational transformations, it became part of the Bureau of Agricultural Economics (BAE).

Busy BAE. Throughout the twenties and much of the thirties, the BAE covered the whole gamut of foreign activities from trade promotion to projections. In 1938, when the Bureau emerged as USDA's central planning agency, it relinquished most of these functions, though it retained responsibility for analytical reports on the world agricultural situation and outlook.

Today, more than 30 years later, BAE's successor, the Economic Research Service, is one of the main sources of long-run projections of world agricultural production, utilization, and trading.

Four principal groups depend on the findings of the Department's foreign economic specialists—Congress, which must formulate aid guidelines and general trade policy; USDA, which must carry out the Congressional mandate; farmers, who need market information; and exporters, who are responsible for transporting American food and fiber to buyers abroad.

Meeting the demands of this varied clientele is an extraordinarily complicated task, with the earth's population burgeoning at the rate of 4 births a second and the "Green Revolution" promising, over the long

run, to push agricultural output to its highest level ever.

Last calendar year, the dollar value of U.S. farm exports amounted to 9.4 billion—up 22 percent from 1971. This fiscal year, the figure is expected to break \$11 billion for the first time in history.

Although farm exports have shown a general upward trend during the last 2 decades, unusually large sales such as these owe a great deal to happenstance. The current banner year, for instance, results from poor grain harvest in Russia—and in much of the rest of the world—that caused the Soviets to buy an unprecedented 19 million metric tons of American cereals and soybeans.

That sort of unexpected development makes the economists' job harder. Yet they have managed to describe world agricultural conditions with considerable accuracy despite the difficulties.

Prophecy comes true. In the late 1960's, when several poor crop years led to widespread pessimism about the international food situation, the Department's analysts projected a rise in per capita supplies. They were right.

Now, in the seventies, pessimism is mounting again, and USDA's researchers are again predicting improvement.

Whether they are right this time will depend largely on developments abroad. But whatever the new situation, economists will be called on to interpret its significance for U.S. agriculture. (13)

[Fifth in a series]

Recent Publications

The Capital Structure and Financial Management Practices of the Texas Cattle Feeding Industry. R. A. Dietrich, J. R. Martin, and P. W. Ljungdahl, Texas A&M University, cooperating with Farm Production Economics Division. B-1128.*

This study considers the characteristics of the Panhandle-Plains cattle feeding industry, the asset-debt structure of feedlots, their sources and levels of operating capital, the extent and importance of custom feeding, and the debt and equity capital organization of various size feedlot operations. Feedlots in the Panhandle-Plains are predominantly large-scale commercial operations. Almost half of all fed cattle marketed are fed in feedlots with one-time capacities in excess of 30,000 head.

Accounting Methods Allowed Farms: Tax Incentives and Consequences. Virden L. Harrison, Farm Production Economics Division. ERS 505.

The purpose of this publication is fourfold: To compare and discuss the cash and accrual methods of accounting available to farmers; to discuss the reasons why most farmers currently use the cash method; to discuss the attributes of the farm accounting methods which provide incentives for nonfarm investments in agriculture; and to indicate some of the consequences if the cash method were revoked.

Estimation of Cost Functions of Northwest Beef Feedlots From Expected Marginal Revenue Observations. Albert N. Halter, Oregon State University; and J. B. Johnson, Farm Production Economics Division. Oregon State Agri. Expt. Sta. Bull. 120.*

The purpose of this study was to develop an efficient estimation procedure for firm cost functions that requires a minimum of data.

Economics of Agriculture: Reports

Single copies of the publications listed here are available free from The Farm Index, Office of Management Services, U.S. Department of Agriculture, Washington, D.C. 20250. However, publications indicated by () may be obtained only by writing to the experiment station or university. For addresses, see the July and December issues of The Farm Index.*

and Publications Issued or Sponsored by USDA's Economic Research Service. Compiled by Eleanor B. Lanier. ERS 368.

This selected list of research publications in the field of agricultural economics and related socio-economic studies updates ERS-368 and Supplements 1, 2 and 3 to ERS 368, and includes citations for five ERS domestic research divisions and both ERS foreign research divisions. Additional Marketing Economics Division publications are listed in ERS-205.

Statistics From "A" to "Y"

If you need to search out specific statistics about agriculture, *Guide to USDA Statistics* will steer you in the right direction.

This ready reference has been specially compiled for those wanting to locate a particular statistical series.

Each major series is listed alphabetically—from "Acreage" to "Yields"—and is briefly described. The guide tells you what the series is, what it measures, what it includes such as subindexes or companion series, limitations or cautions as to how to use, and where current data are available.

The publication also lists Economic Research Service reports that provide a wide range of data relating to agriculture as well as analyses of current and prospective economic conditions.

Ask for Agriculture Handbook No. 429.

Cost of Storing and Handling Grain and Controlling Dust in Commercial Elevators, 1971-72: Projections for 1973-74. Allen G. Schienbein and Carl J. Vosloh, Jr., Marketing Economics Division. ERS-513.

This report develops the 1971-72 handling and storage costs associated with operating 175 commercial grain elevators, and gives projections for 1973/74. Also included is a special report of 37 inland and port terminals showing capital and operating costs associated with dust control systems.

World Demand Prospects for Coffee in 1980: With Emphasis on Trade by Less Developed Countries. Daniel E. Timms, Foreign Demand and Competition Division. FAER 86.

Coffee is almost entirely produced in less developed countries and it is of strategic economic importance to many of these countries. During the late 1960's, coffee exports accounted for over 25 percent of the commodity exchange earnings of at least 15 less developed countries. This study indicates that growth prospects for export earnings (at constant 1964-66 prices) are only moderately optimistic—about 2.2 percent annually.

Forecasting Wheat Production In Turkey. Arthur Coffing, Foreign Demand and Competition Division. FAER 85.

Variation in the quantity and distribution of rainfall in Turkey's main wheat producing area causes wheat output to fluctuate widely from year to year. A mathematical model that emphasizes the relationship between weather factors and wheat yields provides a comparatively reliable preharvest forecast of wheat production levels.

Poverty Dimensions of Rural-To-Urban Migration: A Statistical Report. A Lloyd Bacon and P. Neal Ritchey, University of Georgia; and

Gladys K. Bowles, Economic Development Division. Stat. Bull. No. 511.

This report presents statistics from the 1967 Survey of Economic Opportunity for a study of the poverty dimensions of rural-to-urban migration. Information is included on the total and poor households, families, and populations, and on the migration status and residence history of persons 14 years old and over.

Structure of Seasonal Supply and Demand in the Onion Market. Edward V. Jesse, Marketing Economics Division. MRR 985.

The objective of this study is to assess the impact of future trading in onions on cash onion prices. The study found that year-to-year variability in seasonal prices and production have resulted in a well-defined

cobweb structure. Growers are influenced by past prices in determining onion plantings, and current prices reflect current production levels. Large crops result in low farm prices which, in turn, cause growers to reduce plantings the next year.

Farm Real Estate Taxes: Recent Trends and Developments. Jerome M. Stam and Eleanor L. Courtney, Economic Development Division. Ret 12.

This study reports on taxes levied on farm real estate from 1890-1971, discusses the pros and cons of a value-added tax (VAT), school financing, and presents a summary of tax levies for States classified by Standard Federal Regions.

The Financial Structure and Practices of Texas Rice Producers. Don S. Moore

and J. Rod Martin, Texas A&M University, and J. Bruce Hottel, Farm Production Economics Division. DIR 72-6.*

The basic thrust of this report is to analyze the organization, development, and capital utilization of Texas rice producers.

Insuring Crops and Livestock Losses Caused by Restricted Pesticide Use: An Appraisal. Lawrence A. Jones, Farm Production Economics Division. ERS 512.

This report examines the feasibility of insuring losses to farmers and ranchers caused by restricted use of crop pesticides and predator poisons. It describes characteristics of such losses and reviews potential problems in establishing an insurance program if the basic principles of insurance are to be followed.

Article Sources

Readers are invited to write for the complete reports, studies, speeches, or papers on which we base our articles. Authors and titles are listed below, preceded by numbers corresponding to those appearing at the end of stories in this issue. Those publications indicated by (*) are obtainable only from the university or experiment station cited. The word "manuscript" after an item denotes a forthcoming publication, which we will send you when it comes off press. "Special material" after an item means the article was researched specially for this magazine, although additional information is generally available. Address all inquiries to The Farm Index, Office of Management Services, U.S. Department of Agriculture, Room 1459, Wash., D.C. 20250.

1. William D. Anderson, NRED. Report on Land and Water Resources (manuscript).
2. Russell Barlow, ESAD. *Cotton Situation*, CS-259, February 1973.
3. Don Seaborg, ESAD. *Livestock and Meat Situation*, LMS-189, February 1973; also, *Cattle on Feed*, MtAn 2-1 (1-73).
4. James L. Driscoll and Mack N. Leath, MED. Regional Shares of Grain Exports Estimated for Fiscal Year 1973 (special material).
5. David W. Culver, ESAD. "Possible Directions for Farm Production, Prices, and Income" (speech at the 1973 National Agricultural Outlook Conference, Wash., D.C., February 1973).
- 6, 7, and 8. John E. Lee, Jr., FPED. "Input Requirements in the Food Industry" (speech at the 1973 National Agricultural Outlook Conference, Wash., D.C., February 1973) and special material.

9. William T. Manley and Donn A. Reimund, MED. "Interrelations in Our Food System" (speech at 1973 National Agricultural Outlook Conference, Wash., D.C., February 1973).
10. and 11. Joseph W. Willett, FDCD. "Trends in Foreign Trade in Farm Products" (speech at 1973 National Agricultural Outlook Conference, Wash., D.C., February 1973).
12. Dewain Rahe, FDCD. *Foreign Agricultural Trade of the United States*, February 1973.
13. David E. Brewster, agricultural historian, ESAD (special material).

NOTE: Unless otherwise indicated, authors are on the staff of the Economic Research Service (ERS) with their divisions designated as follows: Economic and Statistical Analysis Division (ESAD); Economic Development Division (EDD); Farm Production Economics Division (FPED); Foreign Demand and Competition Division (FDCD); Foreign Development Division (FDD); Marketing Economics Division (MED); and Natural Resource Economics Division (NRED).

Economic Trends

Item	Unit or Base Period	1967	Year	1972		1973	
				Jan.	Nov.	Dec.	Jan.
Prices:							
Prices received by farmers	1967=100	—	126	119	130	137	144
Crops	1967=100	—	116	111	120	127	131
Livestock and products	1967=100	—	133	126	138	145	153
Prices paid, interest, taxes and wage rates	1967=100	—	127	123	130	131	134
Family living items	1967=100	—	124	121	127	127	129
Production items	1967=100	—	122	118	126	129	132
Ratio ¹	1967=100	—	99	97	100	105	107
Wholesale prices, all commodities	1967=100	—	119.1	116.3	120.7	122.9	124.5
Industrial commodities	1967=100	—	117.9	115.9	119.1	119.4	120.0
Farm products	1967=100	—	125.0	117.8	128.8	137.5	144.2
Processed foods and feeds	1967=100	—	120.8	117.2	123.1	129.4	132.4
Consumer price index, all items	1967=100	—	125.3	123.2	126.9	127.3	127.7
Food	1967=100	—	123.5	120.3	125.4	126.0	128.6
Farm Food Market Basket: ²							
Retail cost	1967=100	—	121.3	117.8	123.1	123.8	127.2
Farm value	1967=100	—	124.4	120.0	126.2	131.4	140.2
Farm-retail spread	1967=100	—	119.3	116.4	121.1	119.0	119.0
Farmers' share of retail cost	Percent	—	40	39	40	41	43
Farm Income: ³							
Volume of farm marketings	1967	100	111	119	158	126	126
Cash receipts from farm marketings	Million dollars	42,693	58,550	4,817	6,937	5,719	6,000
Crops	Million dollars	18,434	24,233	2,197	3,941	2,895	2,700
Livestock and products	Million dollars	24,259	34,317	2,620	2,996	2,824	3,300
Realized gross income ⁴	Billion dollars	49.0	66.4	—	—	70.6	—
Farm production expenses ⁴	Billion dollars	34.8	47.2	—	—	49.4	—
Realized net income ⁴	Billion dollars	14.2	19.2	—	—	21.2	—
Agricultural Trade:							
Agricultural exports	Million dollars	—	7,695	770	1,080	1,110	1,136
Agricultural imports	Million dollars	—	5,825	576	547	550	649
Land Values:							
Average value per acre	Dollars	⁶ 168	⁷ 216	—	—	—	—
Total value of farm real estate	Billion dollars	⁶ 181.9	⁷ 228.1	—	—	—	—
Gross National Product: ⁴							
Consumption	Billion dollars	793.9	1,151.8	—	—	1,194.9	—
Investment	Billion dollars	492.1	721.0	—	—	745.7	—
Government expenditures	Billion dollars	116.6	180.4	—	—	193.4	—
Net exports	Billion dollars	180.1	254.6	—	—	259.3	—
	Billion dollars	5.2	—4.2	—	—	—3.5	—
Income and Spending: ⁵							
Personal income, annual rate	Billion dollars	629.3	935.9	898.9	976.2	982.9	985.4
Total retail sales, monthly rate	Million dollars	26,151	37,348	34,886	38,713	39,277	40,526
Retail sales of food group, monthly rate	Million dollars	5,759	7,914	7,387	8,134	8,025	—
Employment and Wages: ⁵							
Total civilian employment	Millions	74.4	⁸ 81.7	⁸ 80.6	⁸ 82.5	⁸ 82.8	⁸ 82.6
Agricultural	Millions	3.8	⁸ 3.5	⁸ 3.4	⁸ 3.6	⁸ 3.6	⁸ 3.5
Rate of unemployment	Percent	3.8	5.6	5.9	5.2	5.1	5.0
Workweek in manufacturing	Hours	40.6	40.6	40.1	40.9	40.7	40.3
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	3.80	3.70	3.89	3.95	3.98
Industrial Production: ⁵	1967 = 100	—	114	109	118	119	120
Manufacturers' Shipments and Inventories: ⁵							
Total shipments, monthly rate	Million dollars	46,449	62,346	59,189	66,553	66,387	—
Total inventories, book value end of month	Million dollars	84,599	107,047	101,796	106,371	107,047	—
Total new orders, monthly rate	Million dollars	46,763	63,336	59,871	67,587	67,668	—

¹ Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. ² Average annual quantities of farm food products purchased by urban wage-earner and clerical worker households (including those of single workers living alone) in 1959-61—estimated monthly. ³ Annual and quarterly data are on 50-State basis. ⁴ Annual rates seasonally adjusted fourth quarter. ⁵ Seasonally adjusted. ⁶ As of March 1, 1967. ⁷ As of March 1, 1972. ⁸ Beginning January 1972 data not strictly comparable with prior

data because of adjustment to 1970 Census data.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).

UNITED STATES GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS, WASHINGTON, D.C. 20402
OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300

POSTAGE
& FEES PAID
U.S. DEPT.
OF
AGRICULTURE
AGR 101



4653 UNALCS A422 18038 0001
USDA NATIONAL AGRICULTURAL
LIBRARY CURRENT SERIAL RECORD
BELTSVILLE MD 20705